Digital Nebraska

Envisioning Our Future

2007 Update

Nebraska's Statewide Technology Plan

Nebraska Information Technology Commission

Foreword

Feb. 22, 2007

My Fellow Nebraskans:

Information technology is enhancing educational opportunities, increasing productivity, making it easier for citizens to access government services, enhancing public safety, and improving access to health care.

The Nebraska Information Technology Commission's annual statewide technology plan presents a vision for the use of technology in education, economic development, all levels of government, and health care. Rather than starting the statewide technology plan from scratch every year, the Commission has adopted a two-year cycle.   On even-numbered years, the plan will undergo a major refresh.   On odd-numbered years, action items will be updated, but many of the sections and vignettes from the prior year's plan will go unchanged.   To avoid confusion, vignettes are labeled as new, updated, or classic.

I would like to thank the NITC Commissioners, members of the NITC's advisory groups, and the NITC staff for their contributions to the statewide technology plan.

Rick Sheehy
Lieutenant Governor

Sincerely,

Rick Sheehy
Lieutenant Governor
and Chair, Nebraska Information Technology Commission

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Commissioners and Staff

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The Nebraska Information Technology Commission (NITC) was established by the Legislature in 1998 to provide advice, strategic direction, and accountability on information technology investments in the state.

Executive Summary

*D*igital Nebraska: Envisioning Our Future sets forth the vision and goals for the use of information technology in Nebraska, building upon Nebraska's numerous successes. The Nebraska Information Technology Commission has adopted a two-year planning cycle. Because this is the second year of the planning cycle, the 2007 plan is an update of the 2005-2006 plan. Many of the sections and vignettes have undergone only minor revisions. To avoid confusion, vignettes are labeled as new, updated, or classic.

The Nebraska Information Technology Commission (NITC) was established by the Legislature in 1998 to provide advice, strategic direction, and accountability on information technology investments in the state. *Digital Nebraska: Envisioning Our Future 2007 Update* is the seventh statewide technology plan, in accordance with the Legislature's directive (Neb. Rev. Stat. § 86-516) to "annually update a statewide technology plan." The statewide technology plan includes a set of action items that will guide the work of the Nebraska Information Technology Commission (NITC) and its advisory groups.   The development of a statewide technology plan is the primary mechanism by which the NITC addresses its goal of promoting effective planning, management and accountability regarding the state's investments in information technology.

The NITC has identified four additional goals: supporting the development of a robust telecommunications infrastructure; supporting community and economic development; promoting the efficient delivery of government and educational services; and ensuring security and business continuity.

In order to materially advance the Commission's vision and statewide goals, the NITC has identified eight strategic initiatives. These strategic initiatives are projects that are ready to be implemented or that require an enterprise approach, involvement by the NITC, and cooperation of multiple entities for their success.   By emphasizing selected strategic initiatives, the NITC hopes to encourage funding of these initiatives and to encourage state agencies to work together to advance these initiatives. Six of the eight strategic initiatives were included in earlier editions of the statewide technology plan.   This year's updated plan includes one new strategic initiative and an expanded initiative.   Public Safety Communications was added this year in recognition of the Office of the CIO's expanded involvement in public safety communications.   The eHealth strategic initiative builds on and expands the scope of the Nebraska Statewide Telehealth Network initiative included in earlier statewide technology plans.   One strategic initiative from earlier editions of the statewide technology plan has been retired.   With implementation of a statewide K-12 distance learning network underway as a result of the passage of LB 1208 by the Legislature in 2006, the Statewide Synchronous Video Network strategic initiative has been completed.   A brief description of each initiative, listed as supporting the NITC goals, follows:

Executive Summary

Supporting the Development of a Robust Telecommunications Infrastructure

Network Nebraska.   In order to develop a broadband, scalable telecommunications infrastructure that optimizes the quality of service to every public entity in the state of Nebraska, the Office of the CIO and the University of Nebraska engaged in a collaborative partnership that used existing resources to aggregate disparate networks into a multipurpose core backbone extending from Norfolk, Omaha, Lincoln, Grand Island, Kearney and North Platte to the Panhandle. The next phase of this initiative is to formalize business relationships and agreements and to enhance rural bandwidth to public entities through aggregation.   Benefits of Network Nebraska include lower network costs, greater efficiency, interoperability of systems providing video courses and conferencing, increased collaboration among educational entities, new educational opportunities, more affordable Internet access, and better use of public investments.

Supporting Community and Economic Development

Community IT Planning and Development.   In order to foster community and economic development in Nebraska communities through the effective use of information technology, the NITC Community Council has partnered with the University of Nebraska Cooperative Extension and Rural Initiative to form the Technologies Across Nebraska partnership.   Through Technologies Across Nebraska's Podcasting Across Nebraska program, communities and regional groups are creating podcasts to promote local attractions and events and to provide information to citizens. Technologies Across Nebraska's quarterly newsletter, *TANgents*, reaches over 1,000 individuals with an interest in technology-related development.

Promoting the Efficient Delivery of Services

eHealth. eHealth technologies include telehealth, electronic health records, e-prescribing, computerized physician order entry, and health information exchange. The State of Nebraska will build upon the success of the Nebraska Statewide Telehealth Network as it begins to address issues related to the adoption of electronic health records and health information exchange. The widespread adoption of electronic health records is expected to reduce medical errors, improve quality of care, and reduce health care costs for payers.

Public Safety Communications System. The Regional Interoperabilty Advisory Board (RIAB), Office of the CIO, and the Nebraska Emergency Management Agency have established strategic goals and grants guidance to improve state and local interoperable communications capabilities. The statewide telecommunications strategy published by the RIAB integrates regional communications systems, the mutual aid frequency plan, and the state communications infrastructure. The Office of the CIO has developed a plan for a statewide interoperable communications network that consolidates a core of state agencies on a single system platform.

Digital Nebraska: Envisioning Our Future *sets forth the vision and goals for the use of information technology in Nebraska, building upon Nebraska's numerous successes.*

Executive Summary

Digital Education. The primary objective of the Digital Education Initiative is to promote the effective and efficient integration of technology into the instructional, learning, and administrative processes and to utilize technology to deliver enhanced digital educational opportunities to students at all levels throughout Nebraska on an equitable and affordable basis. This initiative will involve the coordination and promotion of several major systems and applications that have either been developed mostly at the local level or have not been replicated statewide.

State Government Efficiency. The State Government Council will address multiple items improving efficiency in state government, including implementing shared services and adopting standards and guidelines. The council has identified and is working to implement six shared services for state government agencies. Also, the council will continue to develop standards and guidelines to better coordinate state agency technology efforts. Benefits of these activities include lower costs, easier interoperability among systems, greater data sharing, and improved services.

E-Government. Through the use of technology, state agencies can enhance information sharing, service delivery, and constituency and client participation. Benefits include improved services for citizens and businesses, and increased efficiency and effectiveness for agencies.

Ensuring the Security of Data and Network Resources and the Continuity of Business Operations

Security and Business Resumption. This initiative will define and clarify policies, standards and guidelines, and responsibilities related to the security of the State's information technology resources. Benefits include lower costs by addressing security from an enterprise perspective, cost avoidance, and protecting the public trust.

Introduction

"Technology can provide a link that further unites our state — a link that bridges our vast prairies and sandhills. Technology has revolutionized farming, it is helping to bring health care services to the smallest of our communities, and it has opened new doors of learning in our schools. We must build on the superb progress that has been made."

—Governor Dave Heineman, State of the State Address, January 26, 2005

Information technology is making information and services more readily available to Nebraskans across the state. Through the Nebraska Statewide Telehealth Network, doctors and nurses at St. Elizabeth Regional Medical Center can set up videoconferences with the families and doctors of infants with special medical needs who reside outside of the Lincoln area. From the convenience of their offices, bank, title company, and law firm staff can search court records through Nebraska.gov. Legislative staff can easily monitor legislative activity using the BillTracker service, another Nebraska.gov service, freeing up resources to better meet constituent needs. Both K-12 and higher education are using Web-based e-learning products to enhance learning. Aggregation of telecommunications services is reducing costs for entities in Wayne and for the ESUs participating in Project 42. Communities are also using technology to provide services and enhance development opportunities. South Sioux City is using a high tech camera system to deter vandals. Through Technologies Across Nebraska's Podcasting Across Nebraska program, communities and regional groups are creating podcasts to promote local events and attractions and to provide information to citizens.

Building upon these and other successes, *Digital Nebraska: Envisioning Our Future 2007 Update* sets forth the vision and goals for the use of information technology in Nebraska.

The Nebraska Information Technology Commission (NITC) was established by the Legislature in 1998 to provide advice, strategic direction, and accountability on information technology investments in the state. *Digital Nebraska: Envisioning Our Future 2007 Update* is the seventh statewide technology plan.

To achieve its mandate, the NITC relies on coordination and collaboration to influence a wide range of information technology issues. The NITC has neither operational authority nor enforcement powers for implementing its policy directives. The NITC has adhered to the legislative directive in Neb. Rev. Stat. § 86-513 to "coordinate the state's investment in information technology in an efficient and expeditious manner."

"Technology can provide a link that further unites our state — a link that bridges our vast prairies and sandhills."

—Governor Dave Heineman

Introduction

High tech system deters vandals

By Lance Martin, City of South Sioux City

South Sioux City is using technology to send this message to would-be vandals: "Stop! This is private property. It is illegal to spray graffiti. Your picture has just been taken and will be used to prosecute you. Leave the area now!"

South Sioux City has implemented four high tech graffiti/vandalism deterrent systems at repeat graffiti problem areas in the city. The syste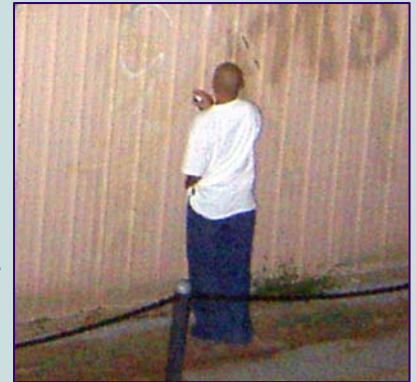m consists of a high quality 5 mega-pixel digital camera, a motion sensor, a remote control and a high powered flash mechanism. The systems are solar powered and don't require any wiring whatsoever making them quick and simple to deploy. The system can be armed so that they are on 24x7 or they can be set to come on at night and shut off in the morning.

A would-be vandal caught in the act by South Sioux City's graffiti deterrent system. Photo courtesy of South Sioux City

The system is mounted to a building or telephone pole and is "aimed" at a building or location where the problem is occurring. When the system is armed and a would-be perpetrator walks within the area of the motion detector sensor, the system activates taking a digital photograph of the area while playing a recording. The recording is customizable. The system can be set to take up to four pictures per event. It is best to set the system to take at least two pictures. After the flash goes off and the recorded message plays, most individuals look up at the camera to see what is going on. The second picture then often catches the individual looking directly at the camera.

The system is a proactive approach to solving the problem of graffiti and vandalism. Very seldom does an individual continue on with the intended graffiti or vandalism after their picture has been taken. The natural reaction in almost all cases is to flee the scene without the crime being committed. The camera system has already caught one perpetrator in the act, spray paint can in hand and also fleeing the scene in his vehicle.

South Sioux City has implemented four high tech graffiti/ vandalism deterrent systems at repeat graffiti problem areas in the city.

NITC Vision and Goals

The vision of the NITC is to improve the quality of life of all Nebraskans by promoting the use of information technology in education, health care, economic development and all levels of government. To achieve this vision, the NITC has identified five goals:

- Support the development of a robust statewide telecommunications infrastructure that is scalable, reliable, and efficient;

- Support the use of information technology to enhance community and economic development;

- Promote the use of information technology to improve the efficiency and delivery of governmental and educational services, including homeland security;

- Ensure the security of the State's data and network resources and the continuity of business operations.

- Promote effective planning, management and accountability regarding the state's investments in information technology.

In order to further these goals, the NITC has identified 8 key initiatives on which to focus. The eight strategic initiatives directly support the first four goals listed.

Although no strategic initiatives are specifically identified for the fifth goal of promoting effective planning, management and accountability regarding the state's investments in information technology, much work is also being done in this area. The development of this statewide technology plan is perhaps the most visible evidence of planning for the effective use of information technology. Other activities which support effective planning, management and accountability include the development of standards and guidelines and the review of technology-related budget requests.

The vision of the NITC is to improve the quality of life of all Nebraskans by promoting the use of information technology in education, health care, economic development and all levels of government.

NITC Vision and Goals

2005-2006 classic vignette

Learning at University of Nebraska extends education beyond classroom

Since the year 2000, the University of Nebraska has used Blackboard, a suite of web-based elearning products, for deployment at all four campuses. Blackboard now serves as the official academic portal for both students and faculty at UNK, UNL, UN Medical Center, and UNO.

When a student logs into Blackboard, each of the courses they are currently enrolled in is automatically displayed. They can easily access all of the information and resources their instructors have provided relative to each course. They are able to take diagnostic quizzes or graded evaluations and immediately see their results. Students who would not participate in classroom discussions often actively participate in online discussions and chat sessions. Blackboard also supports the formation of communities of learning. Students can also personalize their Blackboard "home page" to include other web-based applications and resources (e.g. links to reference libraries, news services, etc).

At this time approximately 90% of all UN students are enrolled in at least one course that utilizes Blackboard, almost 65% of all faculty actively utilize Blackboard for the classes they teach, and Blackboard is used in well over 50% of all courses taught at the University. Blackboard provides a rich, dynamic, and engaging learning environment that encourages participation and collaboration at levels otherwise thought impossible.

As guest columnist for the UNL newspaper *Daily Nebraskan*, senior Ivan Lovegren said, "Blackboard sends education beyond the classroom and into the dorm room, the late-night struggle over unintelligible classical texts and the Wi-Fi coffee shop five miles down the road. It provides a system of immediate connection and information. Networking these benefits among students and scholars pursuing a common goal of understanding and knowledge means all professors at UNL should seek to utilize the Blackboard Learning System."

Role of Advisory Groups

The NITC conducts the majority of its work through four advisory groups and the Technical Panel.

Community Council. The Community Council has 20 members from each of its three focus areas (rural and community information technology development, local governments and libraries, and telehealth), resource providers, and other groups as deemed appropriate by the Community Council and the NITC. The Community Council focuses on the role of information technology in community and economic development.   It seeks to foster the collaborative and innovative use of technology through partnerships between public and private sectors, to improve teleliteracy, and to support community and economic development for Nebraska citizens.

Education Council. The Education Council has 16 members, eight representing the K-12 sector, eight representing the postsecondary sector, and four liaisons as representatives of the Department of Education, the Coordinating Commission for Postsecondary Education, the Department of Administrative Services, and the Nebraska Educational Telecommunications Commission. The Education Council works on common areas of interest in the use of information technology across all sectors of education from elementary through postsecondary levels and including public and private institutions. The Education Council advises the NITC on education information technology needs, goals, and policy. The Council identifies, coordinates, and prioritizes matters pertaining to information technology for a more strategic and cost-effective approach to developing the state's education information technology infrastructure.

eHealth Council.   On Feb. 22, 2007, the NITC approved the creation of an eHealth Council to address issues related to the adoption of interoperable healthcare information technology by the healthcare delivery system in Nebraska.   Members will represent healthcare providers, eHealth initiatives, public health, consumers, payers and employers, and the State of Nebraska.

State Government Council. The State Government Council has 25 members representing state agencies and two members with experience in managing major information technology systems chosen from the private sector. The mission of the State Government Council is to provide direction and oversight for state government information technology vision, goals, and policy. It promotes collaboration on technology issues among state agencies.

Technical Panel. The Technical Panel is a statutory body, which provides technical analysis and recommendations to the Commission. The Technical Panel is codified at Neb. Rev. Stat. § 86-521. It consists of five members approved by the Commission.   The mission of the Technical Panel is to assist in the development of a statewide technical infrastructure that will be scalable, reliable, and efficient, including a shared statewide telecommunications network. It provides technical analysis of projects and recommends technical standards and guidelines.

Each of the councils and the Technical Panel has a charter, adopted by the NITC,

The NITC conducts most of its work through four advisory groups and the Technical Panel.

Role of Advisory Groups

which establishes the council membership, responsibilities, and meeting procedures.   Charters, proceedings, and other information are available on the NITC Web site.

Joint Advisory Group Efforts. On August 9, 2005, members of the NITC's advisory groups met to identify collaborative action items which support the NITC's strategic initiatives.   These action item ideas are being further developed and will be considered for inclusion as action items in the statewide technology plan.

Other Coordinating Entities. The NITC also recognizes the important contributions of other information technology coordinating entities, such as the Criminal Justice Information Systems (CJIS) Advisory Committee, and the Geographic Information Systems (GIS) Steering Committee.   The CJIS Advisory Committee includes representatives of state and local agencies involved in all aspects of criminal justice.   It conducts strategic planning and sponsors automation and data sharing projects.   Further information about the CJIS Advisory Committee is available at http://www.cjis.state.ne.us/.   The Legislature established the GIS Steering Committee in 1991 (Sections 81-2601 through 81-2605), in an effort to coordinate the implementation of GIS technology by state and local governments in Nebraska. Membership on the GIS Steering Committee includes local, state, and federal representatives.   Further information about the GIS Steering Committee is available at http://www.calmit.unl.edu/gis/.

The NITC encourages other information technology coordinating entities to collaborate with the NITC and its advisory councils.

Strategic Initiatives

The NITC has identified eight strategic initiatives, which address the NITC's goals of supporting the development of a robust telecommunications infrastructure; supporting community and economic development; promoting the efficient delivery of government and educational services; and ensuring the security of data and network resources and the continuity of business operations. These initiatives would materially advance the vision and statewide goals as identified by the NITC. By emphasizing selected strategic initiatives, the NITC hopes to encourage funding of these initiatives and to encourage state agencies to work together to advance these initiatives. This year's plan includes one new strategic initiative and an expanded initiative. Public Safety Communications was added this year in recognition of the Office of the CIO's expanded involvement in public safety communications. The eHealth strategic initiative builds on and expands the scope of the Nebraska Statewide Telehealth Network initiative included in earlier plans. One strategic initiative from earlier editions of the statewide technology plan has been completed. With implementation of a statewide K-12 distance learning network underway as a result of the passage of LB 1208 by the Legislature in 2006, the Statewide Synchronous Video Network strategic initiative has been completed.

The NITC has identified eight strategic initiatives which address the NITC's goals.

Supporting the Development of a Robust Telecommunications Infrastructure

Network Nebraska. In order to develop a broadband, scalable telecommunications infrastructure that optimizes the quality of service to every public entity in the state of Nebraska, the Office of the CIO and the University of Nebraska engaged in a collaborative partnership that used existing resources to aggregate disparate networks into a multipurpose core backbone extending from Norfolk, Omaha, Lincoln, Grand Island, Kearney and North Platte to the Panhandle. Benefits of Network Nebraska include lower network costs, greater efficiency, interoperability of systems providing video courses and conferencing, increased collaboration among educational entities, new educational opportunities, more affordable Internet access, and better use of public investments.

Supporting Community and Economic Development

Community IT Planning and Development. The primary objective of this initiative is to foster community and economic development in Nebraska communities through the effective use of information technology. The NITC Community Council has partnered with the University of Nebraska Cooperative Extension and Rural Initiative to form the Technologies Across Nebraska partnership. Technologies Across Nebraska is a partnership of over 40 organizations working to help communities utilize information technology to enhance development opportunities. Through Technologies Across Nebraska's Podcasting Across Nebraska program, communities and regional groups are creating podcasts to promote local attractions and events and to provide information to citizens. Technologies Across Nebraska's quarterly newsletter, *TANgents*, reaches over 1,000 individuals with an interest in technology-related development.

Strategic Initiatives

Promoting the Efficient Delivery of Services

eHealth. eHealth technologies include telehealth, electronic health records, e-prescribing, computerized physician order entry, and health information exchange. The State of Nebraska will build upon the success of the Nebraska Statewide Tele-health Network as it begins to address issues related to the adoption of electronic health records and health information exchange. The widespread adoption of electronic health records is expected to reduce medical errors, improve quality of care, and reduce health care costs for payers.

Public Safety Communications System. The Regional Interoperabilty Advisory Board, Office of the CIO, and the Nebraska Emergency Management Agency have established strategic goals and grants guidance to improve state and local interoperable communications capabilities. The statewide telecommunications strategy integrates regional communications systems, the mutual aid frequency plan, and the state communications infrastructure. The Office of the CIO has developed a plan for a statewide interoperable communications network that consolidates a core of state agencies on a single system platform.

Digital Education. The primary objective of the Digital Education Initiative is to promote the effective and efficient integration of technology into the instructional, learning, and administrative processes and to utilize technology to deliver enhanced digital educational opportunities to students at all levels throughout Nebraska on an equitable and affordable basis. This initiative will involve the coordination and promotion of several major systems and applications that have either been developed mostly at the local level or have not been replicated statewide.

State Government Efficiency. The State Government Council will address multiple items improving efficiency in state government, including implementing shared services and adopting standards and guidelines. The council has identified and is working to implement six shared services for state government agencies. Also, the council will continue to develop standards and guidelines to better coordinate state agency technology efforts.   Benefits of these activities include lower costs, easier interoperability among systems, greater data sharing, and improved services.

E-Government. Through the use of technology, state agencies can enhance information sharing, service delivery, and constituency and client participation.   Benefits include improved services for citizens and businesses, and increased efficiency and effectiveness for agencies.

Ensuring the Security of Data and Network Resources and the Continuity of Business Operations

Security and Business Resumption. This initiative will define and clarify policies, standards and guidelines, and responsibilities related to the security of the State's information technology resources. Benefits include lower costs by addressing security from an enterprise perspective, cost avoidance, and protecting the public trust.

Strategic Initiatives

Each strategic initiative is discussed in greater detail in the following section.

New vignette

LB 1208 supports K-12 video network

The NITC, Technical Panel, and the Office of the CIO, together with the entities that operate Network Nebraska, are working with education partners to create a statewide education network that is capable of transmitting voice, video, and data. With the conversion to IP networking over the next three years, distance education opportunities for students will become richer and more abundant. Classes will begin to be offered over the new network in the northeast region in August 2007.

SNDLC students ask questions of staff from the Homestead National Monument in Beatrice. Photo courtesy of SNDLC

In 2005, LB 689 established a Distance Education Enhancement Task Force to study the issue and make recommendations. The Distance Education Task Force issued a Distance Education Improvement Plan on Dec. 31, 2005. The plan is based on three general principles. First, school districts, educational service units (ESUs), and public postsecondary education institutions retain responsibility for making decisions related to participation in distance education. Second, the plan encourages the exchange of distance education courses using Network Nebraska. Third, the plan provides for statewide coordination through a new entity, the Distance Education Council. The Distance Education Improvement Plan formed the basis for LB 1208 which was signed into law in the spring of 2006.

The NITC, Technical Panel, University of Nebraska, NET, and Office of the CIO staff have been actively involved in many aspects of LB 1208 implementation. The NITC approved two standards related to distance education in 2006. The Chief Information Officer is handling bidding for equipment related to distance education for school districts, ESUs, and postsecondary institutions who want to participate in statewide leasing and/or purchasing contracts. A bid for scheduling software was completed in December 2006.

In addition, an RFP for network, edge devices and Internet service was completed in January 2007 and the videoconferencing equipment bid was bid in April 2007. The Chief Information Officer and Network Nebraska have also been developing policies and procedures to allow school districts, ESUs, and public postsecondary education institutions to connect to Network Nebraska.

With the conversion to IP networking over the next three years, distance education opportunities for students will become richer and more abundant.

Network Nebraska

Objective

- To develop a broadband, scalable telecommunications infrastructure that optimizes the quality of service to every public entity in the State of Nebraska.

Description

Network Nebraska aggregates disparate networks into a multipurpose core backbone extending from Norfolk, Omaha, Lincoln, Grand Island, Kearney, and North Platte to the Panhandle.   The State of Nebraska, Office of the CIO, the University of Nebraska, Nebraska Educational Telecommunications Commission, Department of Education, Public Service Commission, and the Nebraska Information Technology Commission have formed the Collaborative Aggregation Partnership (CAP) to guide and implement Network Nebraska. The next phase of this initiative is to formalize business relationships and agreements and to enhance rural bandwidth through local aggregation.

The major components of this initiative include:

- Development of a scalable, reliable, and secure telecommunications infrastructure that enables any type of eligible entity (i.e., local and state government, K-12 and higher education, health care institutions) to purchase the amount of service that the entities need, when they need it, on an annual basis;

- Establishment of a catalog of value-added services that enables eligible entities to pick and choose applications that are pertinent to them (e.g., Internet1, Internet2, and videoconferencing);

- Implementation of a network operations center that offers a helpdesk, network diagnostics, and engineering assistance in order to ensure acceptable qualities of service;

- Establishment of a billing or accounting center to accept service orders, extend service agreements, provide consolidated billing, and to maintain customer accounts.

Network Nebraska

Benefits

Through aggregation of demand, adoption of common standards, and collaboration with network services and applications, participants can achieve many benefits, including:

- Lower network costs;

- Greater efficiency for participating entities;

- Interoperability of systems providing video courses and conferencing;

- Increased collaboration among all K-20 educational entities;

- New educational opportunities;

- Competitiveness with surrounding states; and

- Better use of public investments.

Action Plan

Current Action Items

1. Identify Tier II communities that offer opportunities for aggregation for services onto the network.

> **Action:** The CAP will identify and work with communities that express an interest in aggregating their public sector transport.
>
> **Lead:** Network Nebraska (CAP)
>
> **Participating Entities:** Specific communities, NITC Community Council, Nebraska League of Municipalities, Nebraska Association of County Officials, public libraries, NITC Education Council
>
> **Timeframe:** 2007
>
> **Funding:** No funding required for this action item.
>
> **Status:** Continuation

Network Nebraska

Action: The CAP will write and release a brief that explains the technical feasibility of sharing public sector transport over high bandwidth, IP-based circuits in order to incentivize Tier II aggregation.

Lead: Network Nebraska (CAP)

Participating Entities: NITC Education Council, NITC Community Council, ESU-NOC, Nebraska League of Municipalities, Nebraska Association of County Officials, public libraries

Timeframe: 2007

Funding: No funding required for this action item.

Status: Continuation

2. The Chief Information Officer will continue the LB 1208 implementation by annually bidding infrastructure and connectivity for new regions of participants and developing the most cost-effective and efficient support structure possible for the statewide network.

Action: The Chief Information Officer's network design/support team will work with local and regional education entities to develop a cooperative support system for the statewide network that will mitigate data transport and synchronous video problems.

Lead: Chief Information Officer

Participating Entities: Network Nebraska (CAP)

Timeframe: 2007

Funding: No funding required for this action item.

Status: Continuation – Revised

Action: The Chief Information Officer will annually update the State master purchase contracts for edge devices and codec equipment and monitor the local site purchases of edge device and codec equipment in order to achieve network equipment standardization.

Network Nebraska

Lead: Chief Information Officer

Participating Entities: Network Nebraska (CAP)

Timeframe: 2007

Funding: No funding required for this action item.

Status: Continuation (revised action previously listed under the Statewide Synchronous Video Network strategic initiative)

3. **Offer Internet I services to eligible network participants.**

Action: The CAP will accept new orders for Internet service and continue to aggregate purchasing demand to secure a more economical price for statewide Internet service.

Lead: Network Nebraska (CAP)

Participating Entities: NITC Education Council, NITC Community Council

Timeframe: 2007

Funding: No funding required for this action item.

Status: Continuation

Future Action Items

1. Convene a work group to use high bandwidth flexible use circuits as community aggregation points and create a statewide, high bandwidth digital content delivery system using satellite, terrestrial and wireless technology.

2. Investigate the feasibility of offering advanced network services to Network Nebraska customers.

Network Nebraska

Completed Action Items (2005-2006)

1. Created a Service Level Agreement for use by CAP and the eligible network participants.

2. Created a Network Nebraska Level 1 Helpdesk at 888-NET-NEBR (888-638-6327).

3. Created a Network Nebraska Web site (www.networknebraska.net).

4. The Chief Information Officer will establish criteria for "access to" Network Nebraska in order to satisfy the requirements of LB 1208.

5. Implement a cost and funding model to allow shared use of the statewide backbone for data transport.

6. Develop a three-phase (2007-09) upgrade plan for statewide backbone transport that includes the demand created by the upgrade of K-12 districts and colleges converting to IP networking.

Network Nebraska

Wayne's last mile aggregation provides better services at lower costs

By Dennis Linster, Wayne State College

In November 2002, Wayne City Administrator Lowell Johnson and Wayne State College CIO Dennis Linster presented a proposal to the NITC Technical Panel for approval of a plan to aggregate all of the tax-supported IP-based telecommunication services in Wayne, Nebraska and centrally distribute those services to the tax-supported entities. The initial plan included hosting the telecommunications services for Wayne city offices and NorthStar Regional Services at Wayne State College through a wireless connection. The NITC Technical Panel endorsed the plan as feasible and a promising example of Tier II aggregations among municipalities. The project was named the "Last Mile Project" by their technical team.

Wayne State College had several characteristics that made it a logical service consolidator. The President of the college lent support for this undertaking. The college had a network operating center that was open 24 x 7 and a very high-quality staff to ensure the success of the project. And, the City of Wayne was eager to make this project happen. The technical team chose a wireless transport solution to facilitate a connection between campus and the main city office building. Wireless technology was also used to connect the seven remaining city buildings to the main city office. The city and college technical staffs worked in partnership to make these connections functional.

In February 2003 the connection was completed, and it has been working flawlessly since. After more than two years of rain, sleet, snow, high winds, fog, virus outbreaks, and even power outages, the wireless connection performed very reliably. In 2004, NorthStar Regional Services and Wayne Public Schools were also connected by wireless. NorthStar Regional Services provides community-based services to people with developmental disabilities.

As a Tier II aggregation site, Wayne State College has been able to aggregate

Wireless antenna and tower arrays connect Wayne municipal public entities with the Wayne State College campus. Photos courtesy of Wayne State College

"This is nothing short of a win-win scenario in which the taxpayers are the real winners. Better services, lower costs."

—Dennis Linster

Network Nebraska

public entities' municipal Internet demand with their own and then contract with Network Nebraska for Internet service. The combination has not only improved the quality of service for the involved partners but also lowered costs.

Linster comments about the 'Last Mile Project', "It is evident that the collaboration of support is something that was seriously needed in our community, and likely is needed in other communities as well. Along with the collaboration of support, we have aggregated the services and expanded the opportunities of all partners technically. This is nothing short of a win-win scenario in which the taxpayers are the real winners. Better services, lower costs."

Updated vignette

Project 42 joins Network Nebraska, gains bandwidth and reduces costs

By Alan Wibbels, ESU 10

Project 42—a consortium formed by ESUs 10, 11, 15, and 16—serves 163 school districts in 33 counties and covers approximately 32,000 square miles. Over 10,000 faculty and staff have e-mail accounts provided by the consortium and 50,000 students currently use the network to access the Internet and web-based services available both at the ESUs and around the world.

Prior to joining *Network Nebraska*, Project 42's Internet access costs were approximately $500 per megabit of bandwidth per month ($10,000 per month for 20 megabit) before the e-rate discount. By moving to the state network in 2004, the cost per megabit

Then Lt. Governor Dave Heineman, UNL Assistant Vice Chancellor Kent Hendrickson, UNK Chancellor Doug Kristensen, and ESU 10 Systems Engineer Ron Cone "turned on" access to Internet 2 by Nebraska schools. July 2004 photo courtesy of ESU 10

Network Nebraska

dropped to $150 per megabit per month and Project 42 was able to expand the bandwidth to 30 megabit. As a result, Project 42 was able to deliver greater bandwidth and experience a savings of $5,500 per month!

Project 42 has experienced continued reduction in costs as more customers joined *Network Nebraska*. Obviously the cost for transport across the state is not free. However, as more customers share the cost of the transport and the state uses its aggregated purchasing power to buy greater amounts of Internet access, participants are realizing reduced costs per megabit of bandwidth.

In addition to basic Internet services, *Network Nebraska* provides K-12 schools with the opportunity to participate in Internet 2 services and activities as outlined on the Internet 2 (I2) initiative web site (http://k20.internet2.edu/about/goals.html). Project 42 has used the high-speed I2 access to download large data files and to create interactive connections with students across the United States. Examples of interactive projects include:

- Sixth graders from Bertrand connected with a senior high class in Texas for a lesson on cotton and its many uses.

- Second grade students from Pleasanton connected with second graders in two communities in Texas and New York to share information about their hometowns and cultural differences.

- Several schools in Project 42 interacted with Mr. Cox, a World War II veteran in Texas, who had survived the sinking of the USS Indianapolis by the Japanese in the South Pacific. Students had the opportunity to hear the story first hand and to interact with him.

- A number of connections have been established with the Lewis and Clark Expedition project for the purpose of training teachers how to use Internet2.

By moving to the state network in 2004, Project 42's cost per megabit dropped to $150 per megabit per month. Project 42 has experienced continued reduction in costs as more customers joined Network Nebraska.

Community IT Planning & Development

Each participating community and regional group received training on podcast production by University of Nebraska Extension Educators and equipment to produce podcasts.

New vignette
Nebraska communities create podcasts

South Sioux City, the Highway 14 Association, North Platte/Lincoln County Convention and Visitors Bureau, and Panhandle Public Health District are learning to use podcasting through the Podcasting Across Nebraska program. Podcasting is a method of distributing audio or video files over the Internet which can be played on mobile devices such as iPods or personal computers.

Podcasting Across Nebraska is a collaborative effort of the Nebraska Information Technology Commission, Nebraska Department of Economic Development and Division of Tourism, University of Nebraska (including Extension, UNL New Media Center, UNL Communications and Information Technology, and Computing Services Network), Network Nebraska, Nebraska Lied Main Street program, and Apple Computer. Funding for the program was provided by the Nebraska Information Technology Commission's Community Technology Fund.

Each participating community and regional group received training on podcast production by University of Nebraska Extension Educators and equipment to produce podcasts. Podcasts created through the project will be hosted by Network Nebraska for two years.

Lt. Gov. Rick Sheehy congratulates Greg Koiznan, Lance Martin, Lt. Gov. Rick Sheehy, Lance Swanson, and Danny Bligh of South Sioux City. Photo by Jon Wilson, UNL New Media Center.

Lt. Gov. Rick Sheehy presents Jessica Davies, Wellness/Volunteer Coordinator at the Panhandle Public Health District, with podcasting equipment.

Anne Byers and Lt. Gov. Rick Sheehy congratulate Lisa Cox, Executive Director of the North Platte/Lincoln County Convention and Visitors Bureau.

Fullerton Public Schools Superintendent Jeffrey Anderson, Sen. Annette Dubas, and Lt. Gov. Rick Sheehy congratulate Sandy Patton and the Highway 14 Association.

Community IT Planning & Development

Objective

- To foster community and economic development in Nebraska communities through the effective use of information technology.

Description

The NITC Community Council has partnered with the University of Nebraska Cooperative Extension and Rural Initiative to form the Technologies Across Nebraska partnership. Technologies Across Nebraska is a partnership of over 40 organizations working to help communities utilize information technology to enhance development opportunities. Technologies Across Nebraska facilitates technology-related development by building partnerships, leveraging resources, and strengthening community capacity.

Technologies Across Nebraska's quarterly newsletter, *TANgents*, reaches over 1,000 individuals with an interest in technology-related development. Articles from *TANgents* have been reprinted by several organizations including *Government Technology* .

Technologies Across Nebraska introduced the Podcasting Across Nebraska program in the fall of 2006. Project partners include the Nebraska Information Technology Commission; University of Nebraska (including the New Media Center, Computer Services Network, Communications and Information Technology, and UNL Extension); Nebraska Department of Economic Development; Division of Travel and Tourism; Network Nebraska; Nebraska Lied Main Street; and Apple Computer. Over 30 communities and regional groups applied to participate in the program. The City of South Sioux City, Highway 14 Association, Panhandle Public Health District, and North Platte/Lincoln County Convention and Visitors Bureau were selected to participate in the program and will receive training on podcast production in early 2007. They will also receive hardware and software to produce podcasts. Network Nebraska will host the podcasts created by participants.

The NITC Community Council has partnered with the University of Nebraska Cooperative Extension and Rural Initiative to form the Technologies Across Nebraska partnership.

Community IT Planning & Development

Benefits

The potential benefits of information technology to communities, businesses, health care, local government, education, and citizens are numerous:

- Communities can use the Internet to publicize community events, communicate with former residents, and advertise available commercial sites.

- Businesses can use information technology to decrease costs, increase sales, and provide better customer service.

- Local governments can use information technology to more efficiently deliver services and provide information to citizens.

- Students can take advanced placement courses or study a foreign language through distance learning.

- Through telehealth, patients can receive medical care from specialists and doctors can participate in continuing medical education without leaving their rural communities.

- Citizens can easily access the minutes and agendas of local governments, update their skills through continuing education, and share photos with distant family members.

- The effective use of information technology can improve a community's quality of life and can enhance economic development efforts.

Action Plan

Current Action Items

1. Support community IT development by working with the University of Nebraska and other Technologies Across Nebraska Partners, including the following action steps:

- Continue partnering with Technologies Across Nebraska and the University of Nebraska to promote technology-related development through the quar-

Community IT Planning & Development

terly newsletter, *TANgents*.

- Continue to maintain and update the TAN and NITC Web sites, including adding information on podcasting.

- Provide and/or promote training opportunities on effectively using technology to enhance development opportunities and the delivery of services, especially in the area of IT-related economic development.

    Lead: Community Council

    Participating Entities: Community Council, University of Nebraska Cooperative Extension, University of Nebraska, University of Nebraska Rural Initiative, and other interested entities.

    Timeframe: January 2007– January 2008

    Funding: No additional funding required

    Status: Continuing

2. Promote the use of podcasting by communities and regional groups through the Podcasting Across Nebraska program.

    Lead: Community Council and University of Nebraska Extension

    Participating Entities: Nebraska Information Technology Commission; University of Nebraska (including the New Media Center, Computer Services Network, Communications and Information Technology, and UNL Extension); Nebraska Department of Economic Development, Division of Travel and Tourism; Network Nebraska; Nebraska Lied Main Street; and Apple Computer.

    Timeframe: August 2006– August 2007

    Funding: $19,030 was approved from the Community Technology Fund in August 2006.   Funding for an additional year may be requested from the Community Technology Fund in 2007.

    Status: New

Community IT Planning & Development

Completed Action Items (2005-2006)

1. Supported local efforts to effectively use e-commerce through the Technology Innovation Grants for Economic Revitalization (TIGER) program.   The grant award period ended on January 15, 2007.

"The response has been wonderful in terms of people wanting to learn to create podcasts and deliver information via this technology."
—Connie Hancock

eHealth

Nebraska Statewide Telehealth Network eases baby Trey's transition back home

Born four months early and weighing only 13.9 ounces, Trey Keifer is a medical miracle. He is the tiniest baby to ever survive at Saint Elizabeth Regional Medical Center. His mother, Jessica, was airlifted from North Platte to Lincoln where an emergency Caesarean section was performed to save her life and hopefully that of her unborn son. Both lives were saved to the amazement of the medical teams.

During Trey's four-month stay in the Saint Elizabeth newborn intensive care unit, video-conferences were set up between Saint Elizabeth and Great Plains Regional Medical Center in North Platte using the Nebraska Statewide Telehealth Network.   Through videoconferencing, Jessica was able to arrange support services for the family; family members in North Platte were able to see Trey and to visit with Jessica; and Trey's neonatologists at Saint Elizabeth and his physicians in North Platte were able to discuss his medical needs and care.

Jessica Keifer smiles at her son, Trey. Photo courtesy of St. Elizabeth Regional Medical Center

Impressed with how well videoconferencing has eased Trey's transition back home to North Platte, doctors and nurses at Saint Elizabeth now regularly set up video-conferences with the families and doctors of infants with special medical needs who reside outside of the Lincoln area.

Last year, Trey and his family came back to St. Elizabeth to celebrate his first birthday. Weighing 14 pounds, Trey was talkative and energetic.

Through the Nebraska Statewide Telehealth Network, Jessica was able to arrange support services for the family; family members in North Platte were able to see Trey and to visit with Jessica; and Trey's neonatologists at Saint Elizabeth and his physicians in North Platte were able to discuss his medical needs and care.

eHealth

New vignette

Western Nebraska looks to health IT to improve quality of care

Health care providers in western Nebraska are working together to improve quality of care by creating a health information exchange.

"The need for health information sharing was identified by the CEOs who participate in the Rural Nebraska Healthcare Network four years ago," said Joan Frances, director of the Rural Nebraska Healthcare Network. "They saw that health IT was the wave of the future. They also realized that in a frontier area with limited resources, not all hospitals could equitably implement health IT. They needed to plan together in order to make sure all hospitals in the region could participate in health information exchange. It is a unique commitment and an honorable viewpoint."

A planning grant from the U.S. Department of Health and Human Services Agency for Healthcare Research and Quality (AHRQ) in 2004 enabled partners to begin the planning process for a regional health information exchange (often called a Regional Health Information Organization or RHIO). In 2005, a three-year implementation grant from AHRQ was awarded.

Partners in the original Western Nebraska Health Information Exchange include:

- The Rural Nebraska Healthcare Network
    - Box Butte General Hospital, Alliance
    - Chadron Community Hospital, Chadron
    - Garden County Health Services, Oshkosh
    - Gordon Memorial Hospital, Gordon
    - Kimball Health Services, Kimball
    - Memorial Health Center, Sidney
    - Morrill County Community Hospital, Bridgeport
    - Perkins County Health Services, Grant
    - Regional West Medical Center, Scottsbluff
- Panhandle Public Health District
- Region I Mental Health and Substance Abuse

A HRSA Rural Network Development Grant has provided the opportunity to expand this regional work to Panhandle Community Services Health Center, private physician's clinics, long term care, and others.

University of Nebraska Public Policy Center is the Principle Investigator for the AHRQ grant, providing research and consultation on the project design.

In September 2005, the partners completed a plan for implementing a health information exchange "that will enable providers, patients, and others to share information, communicate orders and results, support evidence-based decision-making, streamline public health disease surveillance and reporting, and enable data management for non-

clinical purposes (e.g., billing, quality management)."

The partners are continuing to make progress toward their goals.

"One of the things that sets this project apart from others around the country is the amount of time and energy that we are dedicating to high-caliber training in health IT and project management," said Joan Frances.

Training sessions with nationally recognized trainers for becoming a Certified Professional in Health Information Technology (CPHIT) and Certified Professional in Electronic Health Records (CPEHR) have been held in the Panhandle.   As a result, the Panhandle has the highest number of certified professionals in health information technology (HIT) and electronic health records (EHR) per capita in the United States. Training has also been offered in project management, vendor selection, process mapping, and skill training.   A training academy developed in partnership with Western Nebraska Community College now offers training for college credit at participating hospitals.   Over 45 user skill training sessions have been offered in the past six months.

Partners are using their own resources to fund electronic health record systems. Some partners already had systems in place. Others are in the process of selecting or implementing systems. Regional West Medical Center operates a Web portal for physicians on staff to have full access to patient information and has recently allowed other physicians to view lab results and x-rays of patients.   The Western Nebraska Health Information Exchange is completing an intensive survey of partner systems and is developing an RFP for a regional sharing solution.

Work has also been done with a legal firm to develop users' agreements and protocols for compliance with privacy and security standards under the Health Information Privacy and Accountability Act (HIPAA).

One of the biggest barriers to the development of health information exchanges or RHIOs is the misalignment of financial incentives.   While providers bear the brunt of the cost of health information technology, consumers and payers (including insurance companies and employers) receive most of the benefits, including improved patient safety, improved quality of care, and reduced medical costs. The Western Nebraska Health Information Exchange is working on a business plan to sustain the project.

The Western Nebraska Health Information Exchange is addressing public health in a unique way.   The entity has developed a reporting matrix which includes the non-mandatory and mandatory reporting that hospitals and clinics do.   Partners have met with state agencies to discuss how the regional health information exchange being developed can interface with state systems.

When pressed to give advice to other entities developing a regional health information exchange, Nancy Shank, associate director of the University of Nebraska Public Policy Center said: "Collaboration is the key. Although the technology is complex and detailed, it is not the key factor. You need partners willing to collaborate and slog through a difficult, time-consuming process with the goal of improving patient safety and quality of care."

"One of the things that sets this project apart from others around the country is the amount of time and energy that we are dedicating to high-caliber training in health IT and project management."
—Joan Frances

eHealth

Objective

- To promote the use of eHealth technologies, including telehealth, electronic health records, and health information exchange, in Nebraska.

Description

eHealth technologies include telehealth, electronic health records, and health information exchange. Nebraska is nationally recognized for its efforts to establish a statewide telehealth network. The State of Nebraska will build upon the success of the Nebraska Statewide Telehealth Network and the strength of the partnerships formed during its development as it begins to address issues related to the adoption of electronic health records and health information exchange.

Telehealth is the provision of health care, patient education, continuing medical education, and administrative services using telecommunications. Nebraska has established one of the most extensive telehealth networks in the country, connecting the state's rural hospitals, regional medical centers, public health departments, and the State of Nebraska. The major functions of the Network are to improve quality and access to care, particularly in rural Nebraska; to provide patient, provider and community education; and to provide another communication source in the event of a natural, man-made or terrorist emergency.

The Nebraska Statewide Telehealth Network is a collaborative effort led by the Nebraska Hospital Association. Partners include:

- Nebraska Hospital Association
- Nebraska hospitals
- Nebraska Public Health Departments
- University of Nebraska Medical Center
- Universal Service Administrative Company
- University of Nebraska System
- Nebraska Information Network
- Nebraska telecommunications companies
- Central Nebraska Area Health Education Center
- Northern Nebraska Area Health Education Center
- Nebraska Panhandle Area Health Education Center
- Nebraska Medical Association

eHealth

- Nebraska State Government
  - ◊ Lieutenant Governor's Office
  - ◊ Nebraska Public Service Commission
  - ◊ Nebraska Health and Human Services System
    - ◊ Bioterrorism Preparedness and Response Section
    - ◊ Office of Rural Health
  - ◊ Nebraska Information Technology Commission
  - ◊ Nebraska Office of the Chief Information Officer
  - ◊ Nebraska Department of Education
  - ◊ Nebraska Educational Telecommunications Commission

Electronic Health Records are the building blocks of an interoperable health information system. An Electronic Health Record (EHR) is a longitudinal electronic record of patient health information, including patient demographics, progress notes, problems, medications, vital signs, past medical history, immunizations, laboratory data and radiology reports. EHR systems can also provide evidence-based decision support, quality management, and outcomes reporting. Health Information Exchange is the exchange of healthcare information electronically across organizations within a region or community. At its most basic level, Health Information Exchange can act as a delivery service among providers. Fully implemented Health Information Exchanges link patient information from disparate providers into a unified personal health record, allowing providers to access a patient's complete medical history and allowing patients to take a more active role in their care.

eHealth technologies include telehealth, electronic health records, and health information exchange.

President Bush has made the adoption of health information technology including electronic health records a national priority. Federal entities have taken the lead in establishing eHealth standards. Because health care is primarily delivered regionally, states and regions are taking the lead in the implementation of health information exchange systems. Many states have formed advisory groups to assess the current adoption of eHealth technologies in the state and to make recommendations on how the state should promote the adoption of eHealth technologies.

Benefits

The Nebraska Statewide Telehealth Network is improving patient outcomes and expanding continuing education opportunities for health professionals. Approximately 1,000 patient consultations were conducted over the network between July 1, 2005 and June 30, 2006. Mental health consultations and teleradiology are the

eHealth

services most often provided via the network.   Telehealth helps patients reduce travel time and costs.   In some cases, telehealth supports the mental and emotional health of patients who may not be willing or able to receive care the traditional way.

The Nebraska Statewide Telehealth Network is improving the operation of government in several ways. The system has greatly enhanced bioterrorism and public health preparedness. On February, 23, 2006 over 70 sites participated in the Avian Bird Flu Conference lead by U. S. Health and Human Services Secretary Mike Leavitt.   The telehealth network is also generating significant savings in staff time and mileage costs, saving hospitals and public health departments over $750,000 in staff time and nearly $700,000 in mileage costs between January 2005 and May 2006.

The widespread adoption of electronic health records and health information exchange is expected to reduce health care costs for employers, reduce costs and increase efficiencies for third party payers, and to improve the quality of health care.

Action Plan

Current Action Items

1. **Facilitate discussions to address interoperability between the Nebraska Statewide Telehealth Network with other state networks.**

   Action: The Nebraska Statewide Telehealth Network has been invited to give a demo of their scheduling system to the NITC Technical Panel and to discuss interoperability between the telehealth network scheduling system and the statewide K-12 distance education network scheduling system. A discussion between the Telehealth Governing Board, K-12 distance education network, Network Nebraska, NITC Technical Panel, Public Service Commission, and USAC will be scheduled to discuss how USAC and NUSF regulations affect interconnection between the telehealth and education networks and to identify possible ways to allow connections between the networks without endangering federal or state universal service funding.

eHealth

Lead Agencies: NITC, NITC Technical Panel, Network Nebraska, Telehealth Governing Board, Distance Education Council

Participating Entities: NITC, NITC Technical Panel, Network Nebraska, Telehealth Governing Board, Distance Education Council, Public Service Commission, USAC

Funding: No new funding is required.

Timeframe: 2007

Status: Continuing--revised

2. Address operational and technical support issues, including defining the level of support that will be provided by Network Nebraska and CAP.

Action: Schedule meetings between CAP, Network Nebraska, and the Telehealth Governing Board to define and discuss operational and technical support issues when needed.

Lead Agencies: NITC Technical Panel, Office of the CIO, Network Nebraska, CAP, and Telehealth Governing Board

Participating Entities: NITC Technical Panel, Office of the CIO, Network Nebraska, CAP, and Telehealth Governing Board

Funding: No new funding is required.

Timeframe: 2007

Status: New

3. Facilitate the continued testing of the Nebraska Statewide Telehealth Network for homeland security and public health alerts and training. The Nebraska Statewide Telehealth Network can be used for bioterrorism training and alerts.   As the connections for phase II of the Nebraska Statewide Telehealth Network near completion, additional testing will need to be done and policies regarding the use of the network for bioterrorism alerts and training will need to be developed.

Action: Conduct regular tests of the Nebraska Statewide Telehealth Network for bioterrorism alerts and develop policies regarding the use of the network for bioterrorism alerts and training.

Lead Agencies: Telehealth Governing Board and HHSS Bioterrorism

Participating Entities: Nebraska Statewide Telehealth Network, Telehealth Governing Board, HHS Bioterrorism, Nebraska hospitals, Office of the CIO

Funding: No new funding required.

eHealth

Timeframe: Ongoing

Status: Continuing

4. Establish an eHealth Council

Action: The NITC will work with HHSS and other stakeholders to determine membership, establish a charter, and convene meetings of the eHealth Council.

Lead Agencies NITC and HHSS

Participating Entities: Numerous stakeholders including the State of Nebraska, health care providers, eHealth initiatives, public health, payers, consumers, and others.

Funding: No new funding required.

Timeframe: Starting in April 2007.

Status: New

Completed Action Items (2005-2006)

1. The Telehealth Network Education Committee has encouraged the delivery of health education through the telehealth network.

Public Safety Communications System

New vignette
CNRI integrates public safety communications systems

The Central Nebraska Region for Interoperability (CNRI), Nebraska's first regional, multi-county interoperable communications hub, integrates the communications systems of first responders and emergency-service providers in 10 Nebraska counties. The CNRI includes Adams, Buffalo, Dawson, Frontier, Gosper, Hall, Hamilton, Harlan, Kearney, and Phelps Counties and includes the cities of Hastings, Grand Island, Kearney, Lexington and Holdrege.

Gov. Heineman speaks at the launch of the CNRI interoperable communications hub on Feb. 10, 2006.

"No single agency has the tools, people and resources needed to address a major tragedy," Gov. Heineman said. "Therefore, cross-jurisdictional cooperation and the communication fostered by interoperable radio systems are keys to an effective emergency response."

The CNRI interoperability project began as a federal Homeland Security grant request and evolved into the system now in place. CNRI allows each county to maintain control of local communications assets and ties together communications resources from participating counties under defined interoperability conditions.

The CNRI interoperability system places computers in each county communications center, which are connected over a business-class network service, which ensures greater reliability than a standard Internet connection. The new equipment is configured for compatibility with existing communications systems. Once the new equipment is activated, predefined rules allow for communication among each network on the CNRI system. Depending on the size and scope of an emergency, these communications may involve one, two or all 10 counties.

The total cost for the regional interoperability system was $1.2 million. Because existing communications equipment does not need to be replaced, the CNRI system represents an affordable way to connect city and county systems using a variety of equipment. The system is adaptable, scalable and expandable and allows for dispatcher control.

Nebraska's statewide communications plan calls for the continued development of similar regional radio network hubs that will eventually allow for an efficient statewide system of interoperable communications without the expense of replacing communications equipment. The new hub system uses radio and high-speed computer networks as a bridge.

"No single agency has the tools, people and resources needed to address a major tragedy. Therefore, cross-jurisdictional cooperation and the communication fostered by interoperable radio systems are keys to an effective emergency response."

—Gov. Dave Heineman

Public Safety Communications System

Objective

- To develop the Nebraska Public Safety communication system and continue developing statewide communications interoperability for public safety.

Description

The Office of the CIO-Network Services has been coordinating the development of interoperable communications using Homeland Security grant funding. Since May 2004 the Network Services team of the Office of the CIO has met with state and local government officials to provide strategic planning and technical assistance for the purpose of developing regional communications capabilities. The Governor's Homeland Security Policy Group prioritized the majority of federal Homeland Security grants for developing interoperable communications. The Nebraska Legislature passed LB 343 in 2005 to direct the Division of Communications (CIO-Networks) to develop standards and interoperable communications systems, and to receive advice from the newly created Regional Interoperability Advisory Board.

Since then, the Regional Interoperability Advisory Board, CIO-Networks and the Nebraska Emergency Management Agency (NEMA) established strategic goals and grants guidance to improve state and local interoperable communications capabilities. The state communications system for state agencies is one facet of a three-part strategy, as envisioned in the LB 343 language – develop a "network of regional systems" approach to solving statewide interoperable communications. The statewide communications strategy integrates regional communications systems, the statewide mutual aid frequency plan, and the state communications infrastructure.

Implementing the statewide communications strategy involves these ongoing efforts:

- Continue developing regional formalization, governance and connectivity

- Form the Nebraska Statewide Interoperability Executive Committee (SIEC) and adopt the statewide mutual aid frequency plan

- Develop the state communications infrastructure and establish regional interconnectivity

Public Safety Communications System

The state communications infrastructure creates an interoperable communications network that consolidates a core of state agencies on a single system platform. The initial agencies include: State Patrol, Game and Parks Commission, State Fire Marshal's Office, and several other user groups. It has been decades since the state has upgraded its public safety communications infrastructure. The system plan establishes the baseline infrastructure and is able to grow as additional agencies migrate to the system.

Benefits

The Office of the CIO-Network Services developed the statewide interoperable communications strategy to coordinate statewide interoperable communications efforts and leverage existing communications assets. CIO-Networks (Public Safety) is providing technical expertise and strategic guidance in support of local, regional, and statewide communications projects. The strategy enables the state to prioritize limited grant funding toward functional and sustainable systems that provide necessary capabilities and interoperability. As part of this statewide strategy, the state communications infrastructure accomplishes the following:

- Reduces multiple agency systems to a consolidated shared infrastructure.

- Provides the ability for the State Patrol and other agencies to be interoperable, where current state systems lack the necessary capacity and technology.

- Interconnects to local communications systems and improves interoperability between state and local agencies.

- Leverages existing local system capabilities without the need for expensive changes to local communications systems.

- Technology platform is expandable and upgradeable as needed, reducing the cost of the initial system.

- Enables additional sharing opportunities on a shared statewide infrastructure.

The statewide communications strategy integrates regional communications systems, the statewide mutual aid frequency plan, and the state communications infrastructure.

Nebraska's Statewide Technology Plan

Public Safety Communications System

Action Plan

Current Action Items

1. CIO-Network Services anticipates issuing a competitive bid after the FY07 legislative session concludes.

- Coordinate with DAS Materiel, DAS Budget Office and state agencies on plan details, clarifications.

- Complete current planning phase for towers and frequencies in anticipation of an RFI/RFP process in FY08.

- Write RFI/RFP document in preparation of competitive bid process.

    Lead: CIO-Network Services

    Participating Entities: State Patrol, Game and Parks Commission, State Fire Marshal's Office, Department of Correctional Services, Department of Agriculture, Nebraska Emergency Management Agency, Department of Roads, and additional agencies as needed.

    Timeframe: August 2006 – January 2008 (anticipated contract award)

    Funding: See current budget information for total system infrastructure and agency equipment. $1M appropriated in FY07, and $2.5M allocated in Homeland Security grant funding.

    Status: New

Completed Action Items (2006)

1. Planned budget estimates for infrastructure and met with agencies to plan interoperability and migration to new system.

2. Contract in process to plan tower infrastructure, frequencies and system specifications.

3. Conducted regional and state meetings regarding statewide communications planning and implementation of interoperability projects. Providing ongoing strategic and technical support to NEMA, state agencies and local officials for ongoing planning and projects.

Digital Education

Westside High School enhances learning through Blackboard support

A key technology component of the Zoology and Physiology courses at Westside High School is their online support site created using Blackboard.com. Two years ago science teacher Brenda Zabel initiated the course Web site that is expanded and updated each year. Announcements, important documents, assignments, pdf versions of PowerPoint presentations, videos, lecture notes, and practice assessments support every aspect of the courses.

Nebraska's 2005 Teacher of the Year Brenda Zabel assisting a student as she accesses the Zoology course Web site.

Video tutorials on a streaming server let students replicate and review the lab activities they've done while in the classroom. Posted assignments can be printed and completed in a traditional way, or they can be completed electronically, thus allowing students to pace their own work, collaborate with others, and revise as often as they wish before pressing the SEND button. A discussion board provides "virtual office hours." Students may electronically post comments and questions, and classmates and teacher can respond to their postings wherever they are.

"It is not unusual for students to post five to 20 messages on the discussion board the evening before a major exam!" said Zabel. Students also contribute weblinks to outside resources they find while doing independent research. Instructors and students both benefit from these digital resources. Because all these support materials are web-based, students may access them 24 hours a day, seven days a week, and anywhere they have Internet access.

"It is not unusual for students to post five to 20 messages on the discussion board the evening before a major exam!"
—Brenda Zabel

Digital Education

Objective

- To promote the effective and efficient integration of technology into the instructional, learning, and administrative processes and to utilize technology to deliver enhanced digital educational opportunities to students at all levels throughout Nebraska on an equitable and affordable basis.

Description

This initiative will involve the coordination and promotion of several major systems and applications that heretofore have either been developed mostly at the local level or have not been replicated statewide.

The initiative will be dependent upon adequate Internet connectivity and transport bandwidth for learners, instructors, administrators, and for educational attendance sites. A minimum acceptable level of classroom technology will have to be established for the initiative to be successful.

The Digital Education Initiative will recognize that many standalone and disparate software applications are needing to undergo integration and convergence so that an instructor can: 1) research digital content, 2) construct a lesson or unit on a computer in a series of virtual or face-to-face or videoconferencing activities using rich multimedia, 3) assess the learners electronically, and then 4) move the student data to a database or data warehouse, 5) export relevant achievement and attendance data to a web-based student information system so parents, or the students themselves, can view it from home; 6) export data to a statewide student information system; and then finally 7) make "real-time" instructional decisions based upon the recently documented progress of the learners.

The primary components of the Digital Education Initiative would include:

- A statewide telecommunications network with ample bandwidth capable of transporting voice, video, and data between and among all education entities [see Network Nebraska];

- Distance insensitive Internet pricing for all Nebraska education entities;

- Development of a statewide eLearning environment so that every teacher and

Digital Education

every learner has access to a web-based, digital curriculum;

- Development of a statewide digital resource library so that any teacher or learner will be able to retrieve digital media for use in instructional and student projects;

- Synchronous videoconferencing interconnections between all schools and colleges;

- The means to coordinate and facilitate essential education opportunities for all students through a statewide student information system; and

- Regional PreK-20 education cooperatives that vertically articulate educational programs and opportunities.

Benefits

Establishing a Digital Education Initiative is critical to Nebraska's future. Internet has gone from a "nice to have" educational application of the 1990's to the "must have" mission critical application of the 2000's. So much of what teachers, students, and administrators do today is tied to Internet-based information and communication. Nebraska's ranking of 6.5 students per Internet-connected computer in the classroom seems to compare favorably with the U.S. average of 8.0 students per Internet-connected computer. (Technology Counts 2005 Report) However, it still makes it challenging for students to complete their digital assignments when they are expected to share six or seven students to a computer.

The benefits of the Digital Education Initiative would include:

- Greater technical capacity for schools and colleges to meet the increasing demands of a more diverse customer base;

- More equitable Internet access for Nebraska schools and colleges that is not dependent upon distance-sensitive pricing;

- A comprehensive Web-based approach to curriculum mapping and organization and automation of student assessment data gathering and depiction;

- The availability of rich, digital media to the desktop that is indexed to Nebraska standards, catalogued, and searchable by the educator or student;

The Digital Education Initiative will promote the effective and efficient integration of technology into the instructional, learning, and administrative processes and to utilize technology to deliver enhanced digital educational opportunities to students.

Digital Education

- A more systematic approach to synchronous video distance learning that enables Nebraska schools and colleges to exchange more courses, staff development and training, and ad hoc learning opportunities.

Each of the components of the Digital Education Initiative are vital to future student success in Nebraska. The components are especially pertinent in that these applications and services provide the foundation for capacity building in our schools and colleges.

Action Plan

Current Action Items

1. Establish standard(s) related to the administration and maintenance of learning management systems and content management systems by K-12 schools.

> **Lead:** NITC Technical Panel
>
> **Participating Entities:** NITC Education Council, myeLearning.org, ESU Distance Education Council, UNL Independent Study High School
>
> **Timeframe:** February 2007 – September 2007
>
> **Funding:** No funding is required for this action item.
>
> **Status:** Continuation. Required by LB 1208.

2. Promote the availability, distribution, and use of digital media throughout the Nebraska educational community.

> **Lead:** NITC Education Council
>
> **Participating Entities:** NITC Education Council
>
> **Timeframe:** March 2007 – December 2007
>
> **Funding:** No funding is required for this action item.
>
> **Status:** Continuation

3. Develop an affordable plan to provide access to learning management system software for every teacher and learner who uses synchronous video distance learning and to also train teachers in effective instructional design to integrate synchronous and asynchronous technologies.

> **Lead:** Distance Education Council
>
> **Participating Entities:** Technical Panel's Learning Management System Standards Work Group, NITC Education Council, ESU Technology Affiliate Group
>
> **Timeframe:** March 2007 – September 2007
>
> **Funding:** No funding is required for this action item.
>
> **Status:** New

State Government Efficiency

> *"The ability to transmit our bid electronically saves us the time and cost of traveling to Lincoln to work on and submit the bid. We like the system."*
>
> —Nancy Jahn

2005-2006 classic vignette

Department of Roads Internet bidding saves contractors time, money

The Nebraska Department of Roads' (NDOR) first Internet bidding was held November 4, 2004, with 19 contractors participating, according to Liz Wunderlich, NDOR Contracts Manager. Contractors are now able to submit their bid via the Internet using the Bid Express (BidX) Internet bidding service. This method of bidding alleviates the contractors from having to submit paper bids, bid bond forms and a computer diskette on letting day.

Nancy Jahn, Western Engineering Company, Inc., Harlan, Iowa, said they were familiar with BidExpress as they had used it in Iowa for the past two years. She said their estimators like the ease of the system. "Estimators know immediately if the bid is submitted correctly," she said. "It allows them to make last minute changes in our bid and transmit those changes quickly and easily."

Jahn said BidExpress also saves them time and money. "The ability to transmit our bid electronically saves us the time and cost of traveling to Lincoln to work on and submit the bid. We like the system."

John Christensen, Christensen Bros., Inc., Cherokee, IA, said they had used the system in Iowa for about five years and the system worked really well for them. He said it saved a four-hour drive to Lincoln and working late hours in a hotel the night before the bid letting. "Now I can just send it over the computer and go to bed," he said. "Also, it is real easy to change the bid at the last minute, with a couple of presses of the computer keyboard. It is much more efficient and eliminates mistakes."

Julie Budnick, Werner Construction, Inc., of Hastings, agreed that the system was much more efficient overall. She said more can be accomplished in less time and with the use of less resources and equipment.

State Government Efficiency

Objective

- To address multiple items improving efficiency in state government, including implementing shared services and adopting standards and guidelines.

Description

The primary components of this initiative are:

Shared Services. The State Government Council has identified a number of potential shared services. The council chose six shared services for further study and implementation at this time. Interested agencies are meeting to further develop these services.

- Business Continuity / Disaster Recovery

- Directory Services

- E-mail

- Enterprise Maintenance / Purchase Agreements

- Field Support Services

- Geographic Information System (GIS)

Standards and Guidelines. The State Government Council, working with the Technical Panel, will continue to develop standards and guidelines to better coordinate state agency technology efforts.

Benefits

Benefits of this initiative include lower costs, easier interoperability among systems, greater data sharing, higher reliability, and improved services.

The State Government Council will address multiple items improving efficiency in state government, including implementing shared services and adopting standards and guidelines.

State Government Efficiency

Action Plan

Current Action Items

Shared Services

1. Implement Business Continuity / Disaster Recovery as a shared service.

Action items are included in the Security and Business Resumption initiative.

2. Implement Directory Services as a shared service.

Action items are included in the Security and Business Resumption initiative.

3. Implement E-mail as a shared service.

    Lead: Beverlee Bornemeier

    Participating Entities: State Government Council, E-mail Work Group

    Timeframe: E-mail technology review to be conducted during 2007.

    Funding: Service rates

    Status: Continuation

4. Implement Enterprise Maintenance / Purchase Agreements as a shared service.

    Lead: Steve Schafer

    Participating Entities: State Government Council, EM/PA Work Group

    Timeframe: Continuation: Antivirus agreement during 2007
                New: Software Reseller Contract Rebid during 2007

    Funding: No funding required.

    Status: Ongoing

State Government Efficiency

5. Implement Field Support Services as a shared service. The Field Support Services work group is looking for avenues to provide better desktop, server, network, and other Information Technology support to staff outside of the Lincoln area.

> **Lead:** Dale Fangmeier
>
> **Participating Entities:** State Government Council, Field Support Services Work Group
>
> **Timeframe:** Review scope and objectives by April 2007.
>
> **Funding:** To be determined.
>
> **Status:** Continuation

6. Implement Geographic Information System (GIS) as a shared service.

> **Action:** Develop a plan (including responsibilities and resource requirements) for the coordinated development, data integration, on-going maintenance and online distribution/Internet mapping service of a composite, "best available", statewide street centerline/address database.
>
> **Lead:** Larry Zink, Coordinator, Nebraska GIS Steering Committee
>
> **Participating Entities:** State Government Council; GIS Steering Committee
>
> **Timeframe:** Planned for 2007: Interagency, intergovernmental planning meetings to develop a long-term strategic plan for on-going upgrading, maintenance, and distribution of street centerline address data.
>
> **Funding:** Investments are planned or currently being made in this data by the Public Service Commission, the State Patrol, and the Dept. of Roads.
>
> **Status:** Continuation. Office of the CIO worked with State Patrol to contract with a private vendor to collect, convert, and integrate the currently "best available" street centerline address data into a statewide dataset for the State Patrol's computerized dispatch system.

State Government Efficiency

Action: Develop a plan for the coordinated delivery of Internet mapping services by state agencies, with the objectives of making GIS services and existing GIS/geospatial data readily available to a broader array of agencies, improving data access and services to the public, minimizing unnecessary duplication of effort, providing data and system backup, and where appropriate, provide for a coordinated security system, including the possibility for limited data access and password protection.

Lead: Larry Zink, Coordinator, Nebraska GIS Steering Committee

Participating Entities: State Government Council; GIS Steering Committee

Timeframe: Follow-up implementation planning in 2007.

Funding: Initial planning should be possible with existing resources available for agencies currently providing or developing Internet mapping services. More detailed planning and implement may require additional resources, which would become clear as a result of the initial planning.

Status: Continuation. Interagency working group has developed a consensus Project Charter and an initial pilot demo of a geospatial data exchange and web services network. A $43,000 grant has been secured.

7. Explore requirements for issuing an RFP to contract vendors that provide temporary IT personnel. Meet with participating state agencies to gain input on how to structure and manage a new contract. The current contract originally expired on June 30, 2006 with an option to renew for an additional two years.

Lead: Office of the CIO

Participating Entities: Office of CIO, DAS Materiel Division and state agencies

Timeframe: To be completed by June 2008

Funding: No funding required.

Status: New

State Government Efficiency

Standards and Guidelines

8. The State Government Council working with the Technical Panel, will continue to develop standards and guidelines to better coordinate state agency technology efforts.

      Lead: Rick Becker

      Participating Entities: Technical Panel, State Government Council

      Timeframe: Ongoing

      Funding: None

      Status: Ongoing

Other

9. Review and revise procurement review process for IT related purchases by state agencies.

      Lead: Steve Schafer

      Participating Entities: State Government Council

      Timeframe: 2007

      Funding: None

      Status: Continuation

10. Review options for integrating agency IT plans and IT project proposal forms into new budget system.

      Lead: Budget Division and Office of the CIO

      Participating Entities: State Government Council, Budget Division

      Timeframe: 2007

      Funding: None

      Status: New

State Government Efficiency

11. Review issues and determine process for maintaining an inventory of noneducation state government technology assets, including hardware, applications, and data bases.

   Lead: Office of the CIO

   Participating Entities: State Government Council

   Timeframe: 2007

   Funding: None

   Status: New

12. Review issues and determine process for project status reporting.

   Lead: Office of the CIO

   Participating Entities: State Government Council

   Timeframe: 2007

   Funding: None

   Status: New

State Government Efficiency

Future Action Items

1. The State Government Council has identified the following as potential shared services.   The list is currently under review by the Council.

Active Directory	Payment Portal
Automated Building Systems (HVAC, access, etc.)	Project Management
Backup Management	R&D
Data Network Design	Remote Access
Data Security	Secure eFax
Database Management	Security
Desktop Support	Server Consolidation / Virtual Servers
Document Management	Software Deployment and Management
Electronic Filing	SQL Database Design and Development
Electronic Records Management	Videoconferencing
Encryption	Voice Network Design
Enterprise Knowledge Management Databases	VoIP
General Platform Management	Wireless
Help Desk	Wiring Services
Instant Messaging	Workflow
Interactive VRU Applications	
Lotus Domino Design and Development	

State Government Efficiency

Completed Action Items (2005-2006)

1. Shared services implemented: Blackberry Service, Storage Area Network (SAN), and review of Virtual Server/Client.

2. E-mail: Anti-spam, anti-virus appliance purchased and implemented.

3. GIS: Publicized metadata standard and held two-day metadata training session.

4. Project review process revised to include the use of portfolio management tools.

5. Within the past two years, 13 standards and guidelines have been adopted, including:

   - Geospatial Metadata Standard
   - Land Record Information and Mapping Standards
   - Security Statement—State of Nebraska Home Page
   - Web Branding and Policy Consistency
   - Web Cookie Standard
   - E-mail Standard for State Government Agencies
   - Lotus Notes Guidelines for State Government Agencies
   - Lotus Notes Standards for State Government Agencies
   - Network Edge Device Standard for Entities Choosing to Connect to Network Nebraska
   - Information Technology Disaster Recovery Plan Standard
   - Wireless Local Area Network Standard
   - Identity and Access Management Standard for State Government Agencies
   - Scheduling Standard for Synchronous Distance Learning and Videoconferencing

E-Government

JUSTICE — HOME — NEBRASKA TRIAL COURTS CASE SEARCH SYSTEM — HAVE QUESTIONS?

2005-2006 classic vignette

Banks, title companies and law firms obtain records from their offices using JUSTICE

In rural Nebraska, businesses such as banks, title companies and law firms often serve a clientele that extends across multiple counties. In the course of doing business, it is often necessary to obtain court records from multiple counties. Until recently, this required a visit to each individual courthouse, requiring personnel resources and the associated time and expense.

With the introduction of JUSTICE court records searches in early 2004, these businesses can now obtain court records statewide (185 of 186 county and district courts) online. From the convenience of their offices, these businesses can search and retrieve the records they need without the time and expense of visiting each individual county.

From the convenience of their offices, these businesses can search and retrieve the records they need without the time and expense of visiting each individual county.

E-Government

Objective

- To further the use of e-government to improve services and increase the efficiency and effectiveness of agencies.

Description

The three goals for e-government are:

- **Government-to-Citizen and Government-to-Business.** Anyone needing to do business with state government will be able to go to the state's Web site, easily find the information or service they need, and if they desire, complete all appropriate transactions electronically. Areas to be addressed include citizen portal enhancement; business portal enhancements; education portal; and forms automation.

- **Government-to-Government.** State agencies will improve services and increase the efficiency and effectiveness of government operations through collaboration, communication, and data sharing between government agencies at all levels.

- **Government-to-Employee and Internal Operations.** Agencies will examine internal operations to determine cost-effective e-government applications and solutions. The purpose of these efforts is to improve efficiency and effectiveness by replacing manual operations with automated techniques.

The e-government principles guiding the council are:

- E-government should be considered a continuous process of using technology to serve citizens and improve agency operations;

- Internet technologies create new opportunities for major change, including self-service, integration of information and services, and elimination of time, distance and availability of staff as constraints to providing information and services;

- Agencies have responsibility for performing statutory functions, which

E-Government

means that agency directors must retain ownership of data, responsibility over the use of information technology, and prioritization of projects within the agency to achieve the greatest benefit;

- Cooperation is critical to achieving the goals of e-government, in order to integrate information and services and allow the easy exchange of information;

- An enterprise approach is essential to e-government, including the topics of accessibility for disabled persons, architecture, directories, funding, portal, privacy, security, and other issues; and

- E-government is defined as the use of technology to enhance information sharing, service delivery, constituency and client participation, and governance by transforming internal and external relationships.

Benefits

The primary benefits from the use of e-government are:

- Improved services for citizens and businesses.

- Increased efficiency and effectiveness for agencies.

Action Plan

Current Action Items

1. Work with the various agencies involved in business registration— including the Secretary of State, Department of Revenue, and Department of Labor — to create an online system for business registration.

    Lead: Nebraska.gov

    Participating Entities: State Government Council, Nebraska.gov, agencies

    Timeframe: 2007

    Funding: To be determined.

Internet technologies create new opportunities for major change, including self-service, integration of information and services, and elimination of time, distance and availability of staff as constraints to providing information and services.

E-Government

Status: Continuation. The scope of the "One Stop Business Registration" process has been reviewed. Nebraska.gov has assigned a project lead for additional efforts.

2. Convene a work group to examine opportunities to improve access to information resources through a knowledge management system.

Lead: Office of the NITC

Participating Entities: Community Council, Education Council, State Government Council, Technical Panel, and Nebraska.gov

Timeframe: 2007

Funding: No funding is required for this collaborative action item.

Status: Continuation

Future Action Items

1. Work with the Nebraska.gov Manager and county officials to provide the means for online payment of property taxes and other local fees. This system is currently being provided by NACO/MIPS. Nebraska.gov will consider the cost benefit of moving forward with this project.

2. Work with the Nebraska State Patrol to review options for providing online access to certain, limited, criminal history information.

3. Develop an online application for use by businesses attempting to find a suitable site for business development.

4. Develop strategies to address the following government-to-government activities:

- **Intergovernmental Cooperation Groups.** Expand upon current intergovernmental cooperative efforts like the CJIS Advisory Committee and GIS Steering Committee; and develop new cooperative groups for those agencies that have specific, shared interests.

- **Integration of Government Information and Services**. Develop strate-

gies for using Internet technologies to provide integrated access to information and services to citizens, businesses, employees, and other governmental entities.

- **Forms Automation.** Work with state agencies and political subdivisions to identify and prioritize opportunities for automating forms that local government uses to interact with state government.

5. The State Government Council will identify specific improvements and value-added services to be incorporated into the state employee portal.

6. Develop method of providing authentication for "first time" users.

7. Work with the Department of Motor Vehicles to provide for online specialty plate ordering and vehicle registration.

Completed Action Items (2005-2006)

1. Worked with the Secretary of State's Office to provide enhancements to election related information and services.

2. Worked with the Accountability and Disclosure Commission to provide for secure online filings and improved access to information. Improvements posted. Nebraska.gov is researching the progress of the online filing component.

3. Worked with the Legislature to provide additional tools to track legislative information, including the ability to track multiple bills from one location and the use of e-mail "push" technology.

4. The Department of Education developed online teacher/administrator certification.

5. Nebraska.gov redesign included a "Local" portal.

6. Marketing strategy was developed to increase public awareness and the use of e-government services.

E-Government

7. Standard was adopted for agency Web sites to include and privacy and security statements and common branding.

8. Department of Motor Vehicles completed online license reinstatement application (in final testing as of February 2007).

9. The business forms database maintained by Nebraska.gov was improved and enhanced search capabilities were implemented.

BILLTRACKER

2005-2006 classic vignette
BillTracker allows legislative offices to devote resources to constituent services

Each year, hundreds of legislative bills, amendments and resolutions are introduced in the Nebraska Legislature. Tracking legislative activity in a paper-based environment drains resources from the offices of elected officials, agency staff, businesses, statewide associations and others interested in the legislative process.

A partnership between the Nebraska Legislature and Nebraska.gov led to the introduction of the BillTracker service in 2005. The system allows users to establish profiles to monitor legislative activity and receive automated e-mail updates each day. According to one legislative staff member, "BillTracker allows our office to put additional resources toward meeting constituent needs in our district because we've significantly reduced the time we spend wading through daily legislative updates."

"BillTracker allows our office to put additional resources toward meeting constituent needs in our district because we've significantly reduced the time we spend wading through daily legislative updates."

—Legislative staff member

Security and Business Resumption

Objective

- To define and clarify policies, standards and guidelines, and responsibilities related to the security of the state's information technology resources.

Description

Information security will serve statutory goals pertaining to government operations and public records. These include:

- Insure continuity of government operations (Article III, Section 29 of the Nebraska Constitution; Neb. Rev. Stat. § 28-901 and 84-1201);

- Protect safety and integrity of public records (Neb. Rev. Stat. § 28-911, 29-2391, and 84-1201);

- Prevent unauthorized access to public records (Neb. Rev. Stat. § 29-319, 81-1117.02, and 84-712.02);

- Insure proper use of communications facilities (Neb. Rev. Stat. § Section 81-1117.02); and

- Protect privacy of citizens (Neb. Rev. Stat. § 84, Article 7).

Major activities include:

- Developing an overall security strategy, including policies, security awareness, and security infrastructure improvements;

- Network security standards and guidelines;

- Education and training;

- Authentication (directory services project);

- Disaster recovery for information technology systems (as part of a broader business continuity planning);

- Compliance with federal privacy and security mandates;

- Security assessments.

Security and Business Resumption

Benefits

Benefits will include lower costs by addressing security from an enterprise perspective, cost avoidance, and protecting the public trust.

Action Plan

Current Action Items

Security

1. Conduct annual independent security audits. Multiple federal programs require periodic computer security audits, including HIPAA, HAVA, and Bioterrorism grants from the Center for Disease Control. Computer security audits are a widely accepted best practice across the public and private sector.

>**Lead:** State Security Officer
>
>**Participating Entities:** State Government Council, Security Work Group
>
>**Timeframe:** Investigate opportunities for aggregating efforts of several state agencies that face federal requirements for security audits – Ongoing.
>
>**Funding:** To be determined.
>
>**Status:** Ongoing

2. Implement security incident response team.

>**Lead:** State Security Officer and State Patrol
>
>**Participating Entities:** State Government Council, Security Work Group
>
>**Timeframe:** December 2007
>
>**Funding:** No funding required for this task.
>
>**Status:** New

Security and Business Resumption

3. Enhance Network Security and Network Management.

> **Action:** Investigate and recommend an enterprise solution to ensure that encrypted traffic adheres to State security requirements.
>
> **Lead:** Office of the CIO - Network Support
>
> **Participating Entities:** State Government Council
>
> **Timeframe:** June 2007
>
> **Funding:** No funding required for this task.
>
> **Status:** Continuation

> **Action:** Evaluate and recommend options for providing encryption to clients across the state's Wide Area Network.
>
> **Lead:** Office of the CIO - Wide Area Network
>
> **Participating Entities:** State Government Council
>
> **Timeframe:** December 2007
>
> **Funding:** No funding required for this task.
>
> **Status:** Continuation

Business Resumption

4. Implement shared disaster recovery facilities. Mission critical systems have three common requirements. Recovery times must be measured in hours, not days or weeks. Recovery facilities should be physically separated so that they will not be affected by a single disaster. There must be staff available to assist with the recovery efforts. Achieving these requirements is very expensive. Sharing disaster recovery facilities and establishing a collaborative approach to disaster recovery is one strategy for managing costs. The Office of the CIO and the University of Nebraska are jointly developing a fast recovery capability using mutual assistance of physically separated data centers.

> **Lead:** Office of the CIO and University of Nebraska

Security and Business Resumption

Participating Entities: State Government Council

Timeframe: Ongoing

Funding: The cost and source of funding have not been determined.

Status: Continuation. Several hardware components have been co-located at current alternate sites. Data recovery time has been significantly reduced. Planning for a shared alternate site providing greater geographic separation has begun. Efforts to identify additional opportunities for collaboration continue.

5. Promote disaster planning for information technology systems, including developing elements of a common planning document and develop an approach for implementation of ICS (Incident Command System).

Lead: Steve Henderson / Dave Berkland

Participating Entities: State Government Council

Timeframe: Ongoing

Funding: No funding required.

Status: Continuation. Director-level meetings, chaired by Lieutenant Governor Sheehy, to discuss restoration of services began in November 2005. Critical business functions for agencies have been identified and prioritized. IT components supporting the critical business functions have been identified. ICS implementation is being more closely coordinated with the Nebraska Emergency Management Agency. Work to explore the possibilities of integrating continuity of operations plans with disaster recovery plans continues.

6. Encourage testing and updating of disaster plans.

Lead: Steve Henderson / Dave Berkland

Participating Entities: State Government Council

Timeframe: Ongoing

Security and Business Resumption

Funding: No funding required.

Status: Continuation. The Continuity of Operations Planning/Disaster Recovery Planning Shared Services Group continues to develop and act on ways to better coordinate disaster recovery planning and to provide for more consistent disaster recovery plans. An NITC standard ("Agency Disaster Recovery Plan - Standard Contents Recommended Practices") has been put in place. Work has been completed to better understand disaster recovery plan assumptions and dependencies.

Future Action Items

1. Convene a work group to improve disaster recovery and business continuity procedures, including homeland security preparedness, for all public entities.

Completed Action Items (2005-2006)

1. Network Security and Network Management: Configured all public IP addresses (164.119) behind the state's firewall complex.

2. Network Security and Network Management: Implemented an intrusion detection and prevention system on the state's Internet connection as part of a layered defense.

3**.** Disaster Planning: Conducted an "executive overview" briefing to state agencies explaining the progress and current and future activities in the development of disaster recovery plans.

4. Security incident reporting process developed.

Security and Business Resumption

With federal funding, the State has designed and purchased a self-contained communications system that could be deployed anywhere in the state at a moment's notice.

2005-2006 classic vignette
Portable system can be deployed for emergency communications

In 2004 the State's Division of Communications received federal grant money for the purchase of telecommunications equipment. The goal of the Division of Communications was to design a self-contained telecommunications system that could be deployed anywhere in the state at a moment's notice. Criteria was developed in order to make the system as flexible as possible, and meet telecommunication needs in a variety of circumstances. Once the criteria was laid out a system was designed, purchased, and built with the following capabilities:

- 24 analog trunks for connectivity to the public telephone network
- 24 digital trunks for connectivity to the public telephone network
- 6 Motorola bag phones with analog adapters that serve as PBX trunks
- 32 analog telephone extension ports w/telephone sets
- 8 wireless ports w/wireless handsets capable of operating within 1square mile of system
- 7 multi-line digital telephone sets
- 1 multi-line attendant console
- 4 port voicemail system
- 8 IP telephone ports w/telephone sets capable of operating anywhere on the state network
- Equipment capable of delivering three 30 mile wireless broadband connections for connectivity to an available IP network or Internet
- CISCO routers and switches for workstation and laptop connectivity
- 3 portable gasoline generators capable of operating entire system for extended periods of time

The telephone system and its components are rack mounted in a 3'x3'x5' box with wheels. All other auxiliary components and telephone sets are packed in durable wheeled plastic containers. The entire system is self-contained and able to be palletized for easy transport.

Advisory Group Members

Community Council

Ted Smith, Chair, Norfolk Public Library

Stacey Aldrich, Omaha Public Library

Chris Anderson, City of Central City

K.C. Belitz, Columbus Area Chamber of Commerce

Len Benson, Faith Regional Health Systems

Scott W. Bovick, City of Nebraska City

Dr. Don Costello, University of Nebraska-Lincoln

Linda Fettig, Nebraska Rural Development Commission

Norene Fitzgerald, York County Development Corporation

Donna Hammack, St. Elizabeth Hospital Foundation

Lance Hedquist, City of South Sioux City

John Jordison, Great Plains Communications

Roger Keetle, Nebraska Hospital Association

Brandon Kelliher, Great Plains Regional Medical Center

Lynn Manhart, Central City Public Library

Brad McPeak, AIM Institute,

Michael Nolan, City of Norfolk

Max Thacker, University of Nebraska Medical Center

Jerry Vap, Public Service Commission

Steve Williams, Department of Economic Development

Dr. Delane A. Wycoff, Pathology Services, P.C.

Advisory Group Members

Education Council

Dr. Jack Huck, Co-Chair, Southeast Community College

Dr. Terry Haack, Co-Chair, Bennington Public Schools

Arnold Bateman, University of Nebraska-Lincoln

Brenda Decker, Department of Administrative Services

Stan Carpenter, Nebraska State College System

Clark Chandler, Nebraska Wesleyan University

Ron Cone, ESU 10

Dr. Eileen Ely, Western Nebraska Community College

Dr. Marshall Hill, Coordinating Commission for Postsecondary Education

Yvette Holly, University of Nebraska Medical Center

Jeff Johnson, Centennial Public Schools

Mike Kozak, Nebraska Department of Education

Joe LeDuc, Catholic Diocese of Lincoln

Chuck Lenosky, Creighton University

Dennis Linster, Wayne State College

Rich Molettiere, Omaha North High School

Ed Rastovski, Wahoo Public Schools

Linda Richards, Ralston Public Schools

Dr. Bob Uhing, ESU 1

Michael Winkle, Nebraska Educational Telecommunications Commission

Advisory Group Members

eHealth Council

The eHealth Council is being formed in the spring of 2007. The Council will include the following representation:

The State of Nebraska and U.S. Government (4)

Health Care Providers (5)
- Hospitals
- Physicians
- Pharmacists
- Long-term health
- Rural health

eHealth Initiatives (4)
- Nebraska Statewide Telehealth Network
- NeHII
- Western Nebraska Health Information Exchange
- Southeast Nebraska Health Information Exchange

Public Health (4)
- HHSS
- Nebraska Public Health Association
- Local Public Health Department
- UNMC College of Public Health

Payers and Employers (3)

Consumers (3)

Resource Providers, Experts, and Others (2)

Advisory Group Members

State Government Council

Brenda Decker, Chair, Chief Information Officer

Bob Beecham, Department of Education

Michael E. Behm, Crime Commission

Dennis Burling, Department of Environmental Quality

Mike Calvert, Legislative Fiscal Office

Carlos Castillo, Department of Administrative Services

Tom Conroy, Office of the CIO, Enterprise Computing Services

Douglas Ewald, Department of Revenue

Pat Flanagan, Private Sector

John Gale, Secretary of State of Nebraska

Rex Gittins, Department of Natural Resources

Dorest Harvey, Private Sector

Lauren Hill, Governor's Policy Research Office

Butch Lecuona, Department of Labor

Jeanette Lee, Department of Banking and Finance (alternate)

Glenn Morton, Workers' Compensation Court

Beverly Neth, Department of Motor Vehicles

Gerry Oligmueller, DAS—Budget Division

Jim Ohmberger, Department of Health and Human Services

Terry Pell, Nebraska State Patrol (alternate)

Jayne Scofield, Office of the CIO, Network Services

Robin Spindler, Department of Correctional Services

Rod Wagner, Library Commission

Janice Walker, Supreme Court

Bill Wehling, Department of Roads

Advisory Group Members

Technical Panel

Walter Weir, Chair, University of Nebraska Computer Services Network

Michael Winkle, Nebraska Educational Telecommunications

Brenda Decker, State of Nebraska

Christy Horn, University of Nebraska Central Administration

Kirk Langer, Lincoln Public Schools

Digital Nebraska

Envisioning Our Future
2007 Update

Nebraska's Statewide Technology Plan

Nebraska Information Technology Commission

www.nitc.state.ne.us